Catalog Number: | Date: | Project:

OVERVIEW

Fresco Lighting Management Panels provide dimming and switching control for any lighting load. Available as a rough-in enclosure or factory pre-wired with or without circuit breakers and main lugs, Fresco LMP is configured for site requirements.
LMP panels and modules are appropriate for conference centers, retail, restaurant, hospitality and house of worship applications, Fresco LMP is engineered for high performance control.

FEATURES

- Optimized design for modern solid state lighting control: adaptive phase module, 0-10V dimming and DALI within one cabinet
- Less than 1W minimum load on phase control dimming module
- Universal voltage operation (120 to 277 V~)
- NEMA SSL7A compliant line voltage dimming
- DMX controlled lighting modules with RDM communication

Panel Configurations
Main Lug and Feed Through

Enclosure Size	Max Module Count	Circuit Breakers Included	
		Main Lug	Feed Through
Small	3	4	1
Medium	6	7	1
Large	9	10	1

NOTE: See Page 4 for dimensions.

Government Procurement
BAA – Buy America(n) Act: Product qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product also qualifies as manufactured in the United States under DOT Buy America regulations.
BABA – Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act.
Please refer to www.acuitybrands.com/buy-american for additional information

Warranty
Two-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

Specifications subject to change without notice.

fresco™

LMP Lighting Management Panels

Modular Dimming and Relay Panels

BAA BABA

ORDERING INFORMATION

Example: LMPM EM 3A 2L MVOLT 4ML 20A

Series	Emergency	Module	Option	Voltage	Feed	Branch Circuit Breaker
LMPS Small enclosure, 3 modules max LMPM Medium enclosure, 6 modules max LMPL Large enclosure, 9 modules max	[blank] None EM Emergency	_A LM4A (Advanced phase selective) module count[1] _L LM4L (0-10V) module count _B LM2B (DALI) module count[2]	[blank] Factory installed lighting modules ENC Empty enclosure only	MVOLT 120-277 volt, 50/60 Hz	FT Feed Through 4ML 4 Wire main lug, 3 phase and Neutral 3ML 3 Wire main lug, 2 phase and Neutral	[blank] No branch circuit breakers (FT Option) 20A 16A continuous rating 16A 12A continuous rating

NOTES:
1. Lutron Hi-Lume ballasts and Acuity dimming modules require minimum 10 devices per LM4A dimmed output. For less than 10 devices install (1) LMP SNB per dimmed output.
2. Maximum of 4 LM2B modules in an enclosure.

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ACCESSORIES: *Order as a separate item.*	
LM4A MVOLT	Advanced phase dimming module
LM4L MVOLT	0-10V module
LM2B MVOLT	DALI module
LMP SNB	Minimal Load Snubber
LMP HVB	High Voltage Barrier

SPECIFICATIONS

Electrical

- Input: 120/277 V~ 50/60 Hz (phase to neutral)
- Available as a feed-through cabinet or with main lugs and circuit breakers
- Branch Circuit Breaker Options & ratings:
  - 20 A, 277V~ max @45° C, 14 kAIC
  - 16 A, 277V~ max @45° C , 14 kAIC
  - Breakers are thermal magnetic and UL489 listed
- Surge protected for 6,000 V, 3,000 A
- Maximum 3-phase current rating at 120Vac:
  - LMPL: 150A
  - LMPM: 100A
  - LMPS: 50A
- Maximum 3-phase current rating at 277Vac:
  - LMPL: 65A
  - LMPM: 43.3A
  - LMPS: 21.7A

Enclosure

- NEMA Type 1
- Maximum Weight with Dimmers:
  - Small: 35 lbs (16 kg)
  - Medium: 55 lbs (25 kg)
  - Large: 75 lbs (34 kg)

Supported Load Types

- LED forward or reverse phase dimmed (4A)
- LED 0-10 V dimmed (4L)
- Electronic low voltage transformer (4A)
- Magnetic low voltage transformer (4A)
- Incandescent/Halogen/Tungsten (4A)
- Non dim (full conduction lighting loads) (4A, 4L)
- Fluorescent 0-10V dimmed (4L)
- Fluorescent 2-wire (4A, 4L)
- Fluorescent 3-wire (4A)
- DALI (2B)
- HID 0-10V dimmed (4L)

Mounting

- Enclosures recess mount between studs or surface mount.
- Indoor use only.

Environment

- 32 to 104° F (0 to 40° C)
- Relative humidity less than 90%, non-condensing

Standards

- UL Listed, CUL
- ESD hardened: IEC61000-4-2, level 4: +/-8 kV contact
- IEC60929 Annex E (DALI and 0-10V control)
- NEMA SSL7A (LED phase dimming control)
- ANSI C82-11 Annex A (0-10V control)
- ANSI E1.11, E1.20, E1.27 (DMX and RDM)

Controller

- LMP controller with numeric display and large buttons supports panel addressing, module programming, diagnostics, flash to find, etc.
- Integral USB port for panel programming.
- Dedicated control circuit breaker provided in 3ML and 4ML panels.

Other

- Assembled in USA
- Convection cooled, no fans
- Automatic over-temperature protection internal to phase control dimming modules

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MODULE OVERVIEW

LM4A Phase adaptive dimming module with selectable forward and reverse phase cut dimming selection and an air gap relay per channel.

Input Voltage	120 V~ to 277 V~
Channel Count	4
Input Circuits	1
Fall Time (reverse phase control)	165 µsec (independent of load)
Rise Time (forward phase control)	80 µsec at 120 V 165 µsec at 277 V~ (independent of load)
Total Module Output Rating	16.6 A at 120 V~, 7.2 A at 277 V~
Max Channel Rating (continuous)	8.3 A at 120 V~, 3.6 A at 277 V~
Minimum Load	0.1W (Note 1)
Load Types (configured per channel)	• LED • Electronic Low Voltage • Magnetic Low Voltage • Incandescent • 2-Wire (advance Mark 10,Sylvania Powersense®, Lutron Tu-Wire®) • 3-Wire (Lutron Hi-Lume®) • Non-dim

LM4L Four circuit 0-10V dimming module with four independent mechanically latching relays. Relays are individually replaceable and feature a manual override handle. 0-10V dimmers have a wide operating range, are isolated and protected against wiring faults.

Input Voltage	120 V~ to 277 V~
Circuit Count	4
Input Circuits	4[2]
Relay Rating	20 A @ 277 V~ Resistive/Magnetic 16 A @ 277 V~ Electronic 20A @ 250 V Tungsten 20 FLA @ 120 V for Motor
0 - 10V Dimmer low end	0.1 V (compatible with eldoLED)
0 - 10V Dimmer	2500 V isolation
0 - 10V Dimmer Capacity	100 mA sink each
0 - 10V Dimmer Protection	over voltage & over current
0 - 10V Dimmer Wiring Method	Class 1 or Class 2
Load Types	• 0-10V (IEC 60929 compliant devices) • Non-dim
SCCR (relay)	14 ,000 A @ 277V~

LM2B Digital (DALI) ballast and LED driver control module with integrated bus power supply and controller for two independent DALI loops supporting up to 64 ballasts or drivers per loop.

Input Voltage	120 V~ to 277 V~
DALI Loops	2
Input Circuits	1
DALI Output Voltage (nominal)	18 VDC
DALI Output Current (each loop)	150 mA
DALI Loop Isolation	2500 V isolation
DALI Loop Wiring Method	Class 1 or Class 2
DALI Loop Protection	over voltage & over current
Load Types	DALI (IEC 60929.E)

Note 1:
Lutron Hi-Lume ballasts and Acuity RDM remote dimmers require a minimum 10 devices per LM4A dimmed output. For less than 10 devices install (1) LMP SNB per dimmed output.

Note 2:
When installed as part of a 3ML or 4ML panel, all four relays will be fed from a single circuit breaker; the total load for all four output circuits cannot exceed the circuit breaker continuous rating. When installed as part of a FT panel, each relay can be fed by an individual circuit breaker.

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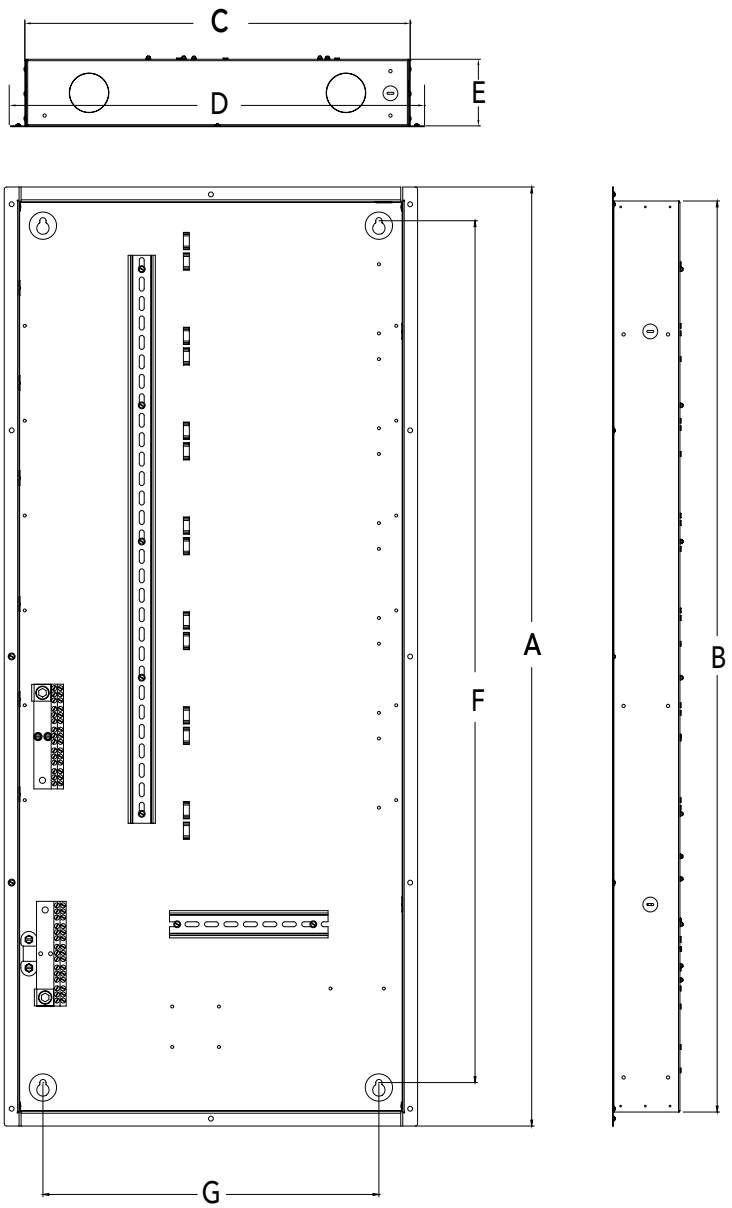
DIMENSIONS



	Panel Size in inches (mm)		
Dimension	**Small**	**Medium**	**Large**
A	32 5/8 (829)	47 1/2 (1207)	61 3/8 (1559)
B	31 3/16 (792)	46 1/8 (1172)	60 (1524)
C	20 5/16 (516)	20 5/16 (516)	20 5/16 (516)
D	19 1/2 (495)	19 1/2 (495)	19 1/2 (495)
E	3 3/8 (86)	3 3/8 (86)	3 3/8 (86)
F	28 11/16 (729)	43 5/8 (1108)	57 1/2 (1461)
G	17 (432)	17 (432)	17 (432)

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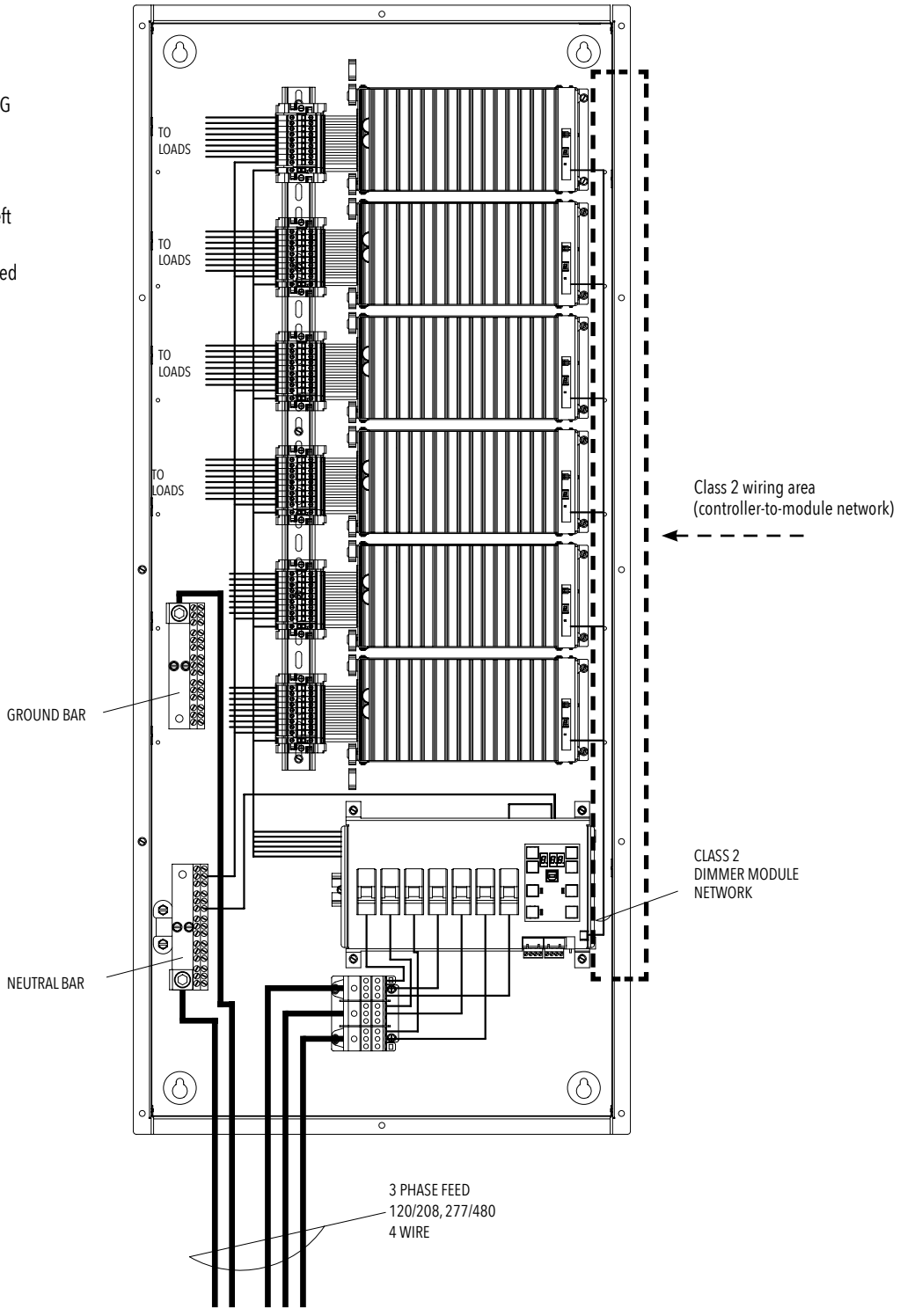
FEED AND FIELD WIRING

Wire Sizes and Load Wiring

- Load terminal bocks: #14 AWG to #10 AWG
- Main lugs: #14 AWG to #2/0 AWG

Notes

- Main feed entry from top left or bottom left is supported
- Class 2 wiring should enter where indicated



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CONTROLLER AND NETWORK WIRING

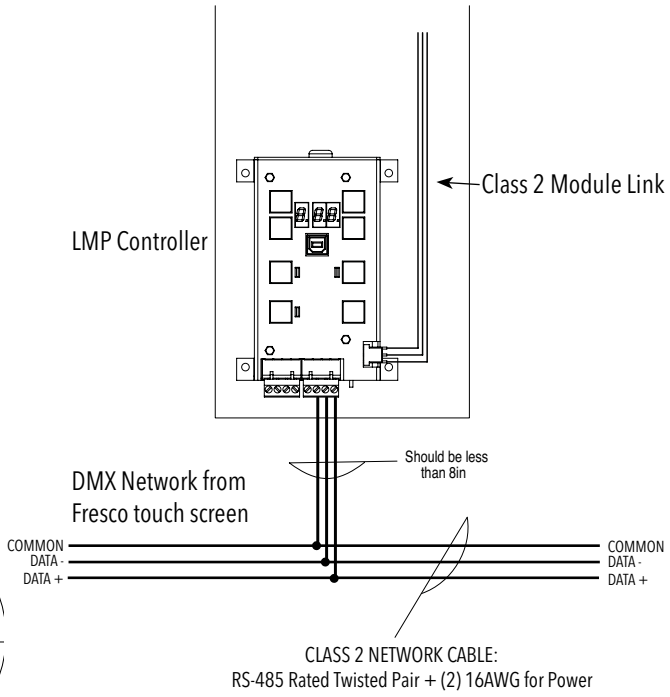
This Network is Class 2 requires specific wiring methods to be followed.

Each LMP on the network requires the controller to be connected as shown below. Note, the controller to module communication is accomplished through the module wire harness provided within the panel.

DMX/RDM Control Network

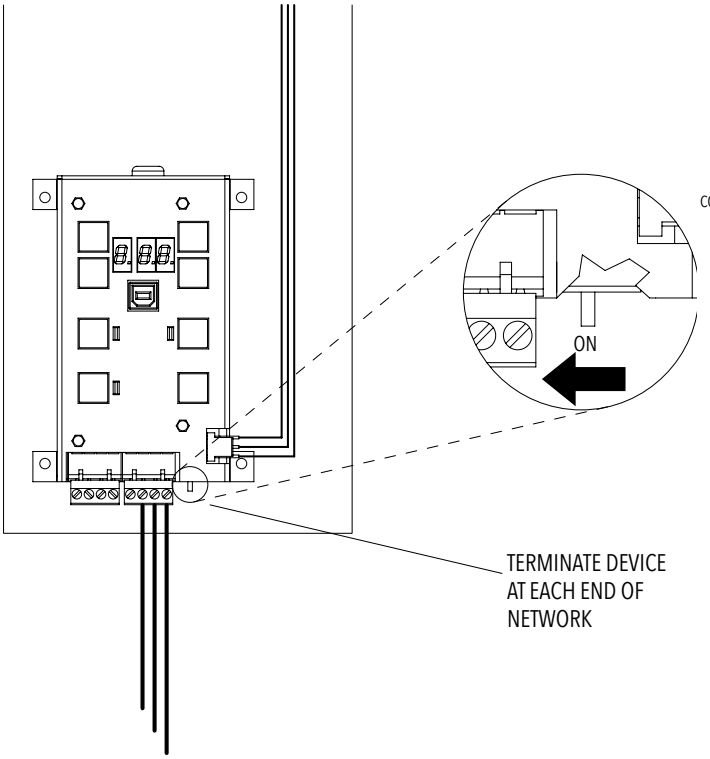
- The LMP controller connects to the Fresco controller using the DMX network using the wiring pinout table below
- Connects with a provided plug in 4-position harness.
- All network connections must be a daisy chain

Terminal	Signal	Wire Color
1		No Connection
2	Com	Black
3	B (-)	Yellow / Black Stripe
4	A (+)	White / Black Stripe



Termination

- Activate network termination by activating the switch to the "ON" position for any one LMP controller located at the end or beginning of the network
- Termination switches is located on the LMP controller as shown:



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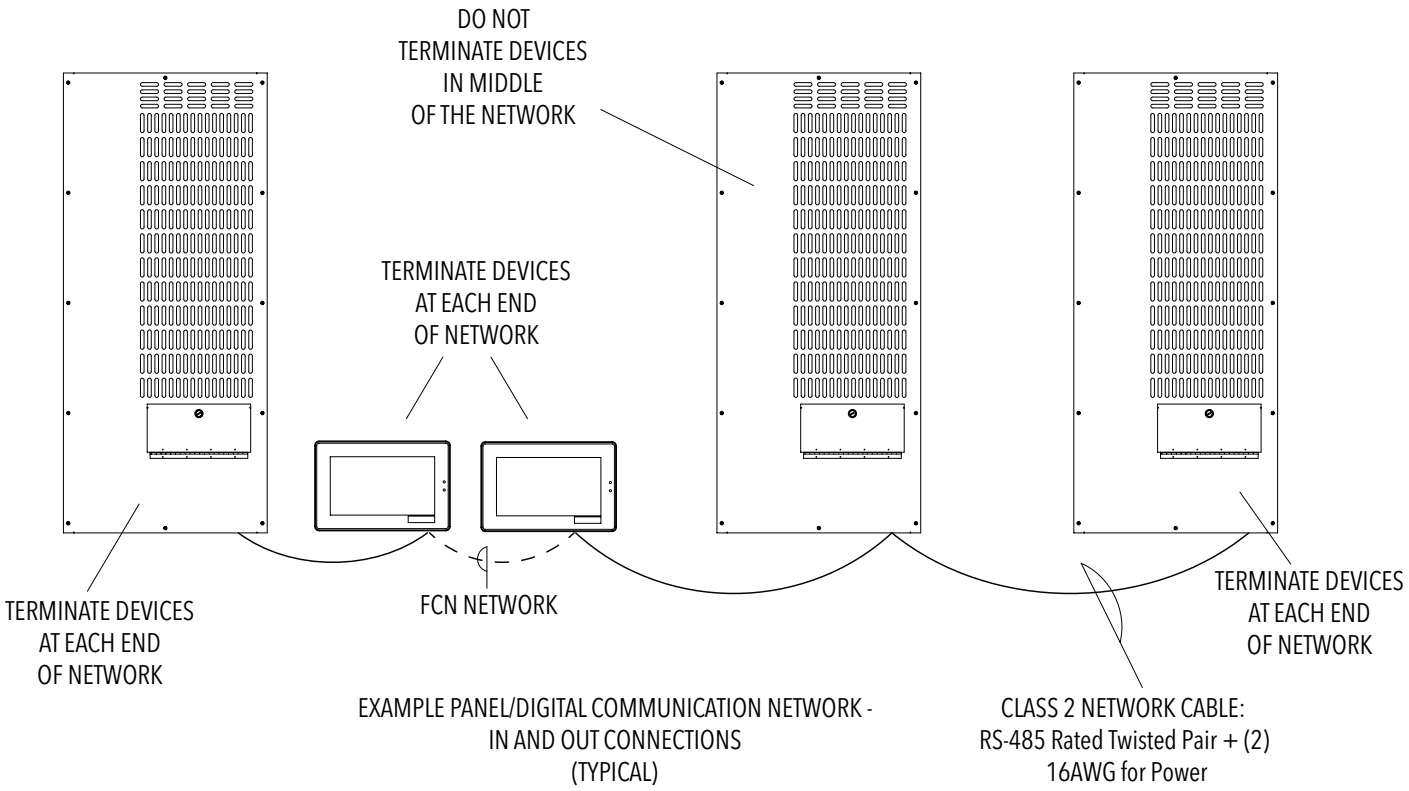
NETWORK OPERATION



Termination

- All Fresco system devices (touchscreen and LMP) have termination switches
- Activate network termination by activating the switch to the "ON" position
- Termination switches are located:
  - Back of the Fresco touchscreen
  - LMP Controller near the network terminal

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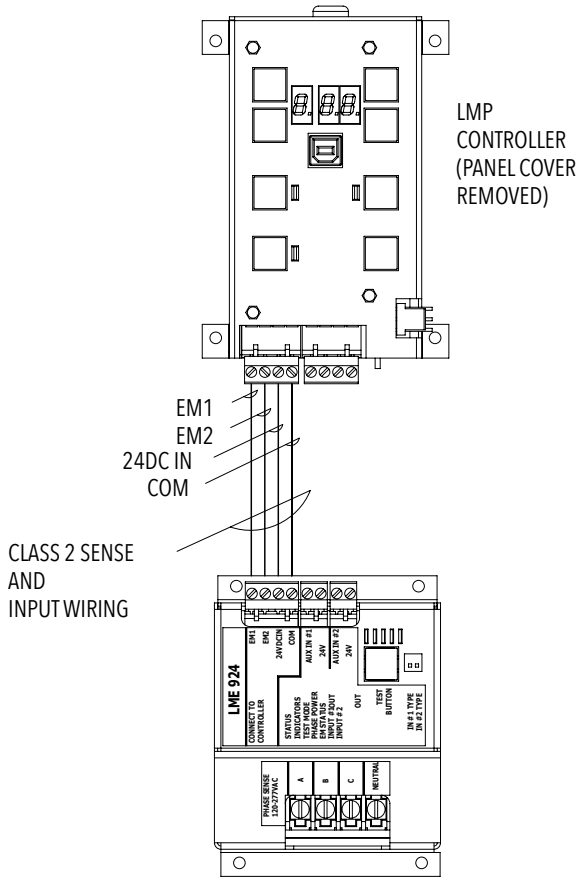
UL 924 EMERCENGY LMP (LME 924)

Fresco lighting management panels may be configured for emergency (essential) lighting control. When ordered with the EM option, LME 924, a UL 924 listed phase sense device is factory installed near the bottom of the lighting panel enclosure. Either a brownout or full blackout condition causes LME 924 to signal to the LMP controller that a fault is present, driving all modules within the panel to their emergency condition.

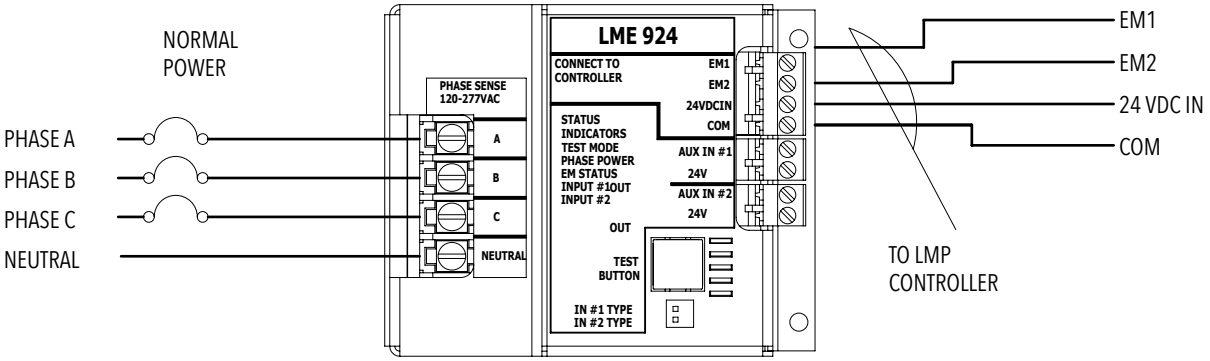
LME 924 also supports testing via push button and/or contact closure trigger via security or fire alarm systems as well.



LME 924
EMERGENCY MODULE
(PANEL COVER REMOVED)

Wiring Notes

- LME 924 may be fed with single, dual and three phase power, follow LME 924 installation manual
- Test and status LED indicators are visible only when the cabinet cover is removed
- Emergency sense (EM1, EM2) and power supply from the controller (24 VDC IN, COM) are Class 2
- Only feed normal power to the LME 924 device's input sense terminals



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